



LEXSEE 27 F.3D 551

IN RE FRANCIS S. GURLEY

94-1025

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

27 F.3d 551; 1994 U.S. App. LEXIS 14661; 31 U.S.P.Q.2D (BNA) 1130

June 15, 1994, Decided

PRIOR HISTORY: [**1]Appealed from: U.S. Patent and Trademark Office Board of Patent Appeals and Interferences

DISPOSITION: AFFIRMED.

COUNSEL: Michael A. Cantor, Fishman, Dionne & Cantor, of Windsor, Connecticut, submitted for appellant.

James T. Carmichael, Associate Solicitor, Office of the Solicitor, of Arlington, Virginia, submitted for appellee. With him on the brief were Fred E. McKelvey, Solicitor and Lee E. Barrett, Associate Solicitor.

JUDGES: Before NEWMAN, PLAGER, and CLEVENGER, Circuit Judges.

OPINION BY: NEWMAN

OPINION: [*552] NEWMAN, Circuit Judge.

Francis S. Gurley appeals the decision of the Board of Patent Appeals and Interferences, n1 affirming the Examiner's rejection of all of the claims of application Serial No. 07/524,373. The Board determined that these claims are unpatentable for obviousness in terms of 35 U.S.C. § 103, in view of Japanese Patent Specification No. 56-76591 (Yamaguchi) and the prior art set forth in Gurley's specification.

We agree that the prior art constituted a *prima facie* case of obviousness, placing on Mr. Gurley the burden of coming forward with evidence and argument in rebuttal. See *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. (BNA) 785, 788 (Fed. Cir. 1984). [**2] Mr. Gurley did not meet that burden.

Discussion

Claim 1 of the Gurley patent application is representative, and defines the Gurley invention as follows:

1. A printed circuit material for forming shape retaining multi-planar circuit boards consisting essentially of:

a substrate material made of a nonwoven web impregnated with an epoxy;

said substrate having a thickness of between about 0.010 inch and 0.062 inch;

at least one sheet of electrically conductive material laminated to at least one side of said substrate;

said electrically conductive sheet having a thickness of between 0.0006 inch and about 0.003 inch; and

said laminate of epoxy impregnated nonwoven substrate material and electrically conductive material being capable of being formed and bent into a shape retaining multi-planar shape at room temperature without requiring fastener means to retain said multi-planar shape.

Gurley states that his invention is directed to an epoxy based printed circuit material that is bendable and shape-retaining, wherein the epoxy has a glass transition temperature at or near room temperature. n2 The epoxy is not otherwise described or limited. The Yamaguchi reference describes a printed [**3] circuit material for forming circuit boards similar to those of Gurley, comprising a fibrous substrate impregnated with a polyester-imide resin instead of the epoxy resin claimed by Gurley. The nature of the resin is the only significant difference from the prior art circuit material. However, epoxy is mentioned by Yamaguchi as known for this use. According to Yamaguchi, circuit boards having an epoxy-impregnated fibrous substrate [*553] have "relatively acceptable dimensional stability" and "some degree of flexibility," but are inferior to circuit boards made with his polyester-imide resins.

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n2 Glass transition is an indicator of a resin's flexibility. It is defined as the temperature at which the resin "loses its hardness or brittleness, becomes more flexible, and takes on rubbery or leathery properties." Board Op. at 8 (citing Stille, *Introduction to Polymer Chemistry* 30-31 (1962)).

Referring to the statement of inferiority in the Yamaguchi reference, Mr. Gurley argues that Yamaguchi "teaches away" from Gurley's invention. [**4] A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant. See *United States v. Adams*, 383 U.S. 39, 52, 148 U.S.P.Q. (BNA) 479, 484, 15 L. Ed. 2d 572, 86 S. Ct. 708 (1966) ("known disadvantages in old devices which would naturally discourage the search for new inventions may be taken into account in determining obviousness"); *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550-51, 220 U.S.P.Q. (BNA) 303, 311 (Fed. Cir. 1983) (the totality of a reference's teachings must be considered), cert. denied, 469 U.S. 851 (1984); *In re Sponnoble*, 56 C.C.P.A. 823, 405 F.2d 578, 587, 160 U.S.P.Q. (BNA) 237, 244 (CCPA 1969) [**5] (references taken in combination teach away since they would produce a "seemingly inoperative device"); *In re Caldwell*, 50 C.C.P.A. 1464, 319 F.2d 254, 256, 138 U.S.P.Q. (BNA) 243, 245 (CCPA 1963) (reference teaches away if it leaves the impression that the product would not have the property sought by the applicant).

Gurley's position appears to be that a reference that

"teaches away" can not serve to create a *prima facie* case of obviousness. We agree that this is a useful general rule. However, such a rule can not be adopted in the abstract, for it may not be applicable in all factual circumstances. Although a reference that teaches away is a significant factor to be considered in determining unobviousness, the nature of the teaching is highly relevant, and must be weighed in substance. A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use.

The facts in Gurley's record are that this use of epoxy was known, the structure of these circuit boards was known, and epoxy had been used for Gurley's purpose. We share Gurley's view that [**6] a person seeking to improve the art of flexible circuit boards, on learning from Yamaguchi that epoxy was inferior to polyester-imide resins, might well be led to search beyond epoxy for improved products. However, Yamaguchi also teaches that epoxy is usable and has been used for Gurley's purpose. The Board recognized Yamaguchi's teaching of the deficiencies of epoxy-impregnated material, but observed that Gurley did not distinguish his epoxy product from the product described by Yamaguchi. On the facts of this case, Gurley's "teaching away" argument was insufficient to establish patentability. Gurley did not offer specific epoxies, or improved properties, and we are not presented with the question of whether any such products might meet the requirements of patentability. Even reading Yamaguchi's description as discouraging use of epoxy for this purpose, Gurley asserted no discovery beyond what was known to the art.

The Board correctly held that Gurley's invention would have been obvious in view of the Yamaguchi reference in combination with the prior art set forth in Gurley's specification.

AFFIRMED